

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number  
**WO 2005/063566 A2**

(51) International Patent Classification<sup>7</sup>:

**B64D**

(74) Agent: BEYER, Andreas; Wuesthoff & Wuesthoff, Schweigerstrasse 2, 81541 München (DE).

(21) International Application Number:

PCT/EP2004/014860

(22) International Filing Date:

30 December 2004 (30.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

103 61 653.5 30 December 2003 (30.12.2003) DE

(71) Applicant (for all designated States except US): **AIRBUS DEUTSCHLAND GMBH** [DE/DE]; Kreetslag 10, 21129 Hamburg (DE).

(72) Inventors; and

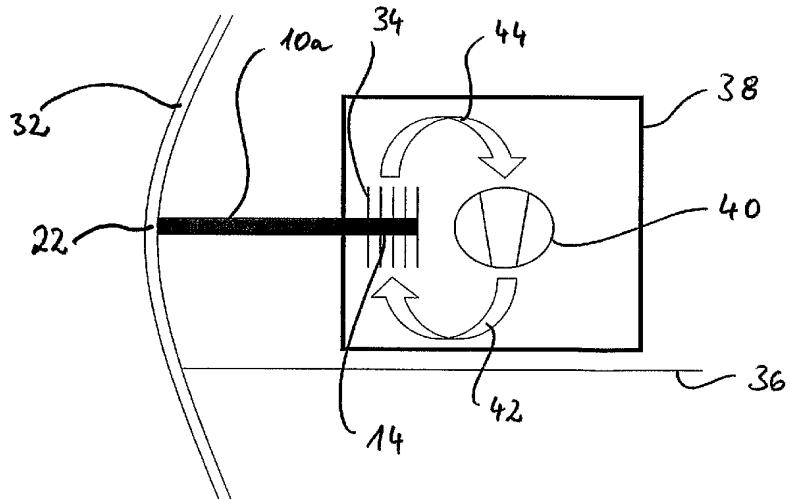
(75) Inventors/Applicants (for US only): **MÜHLTHALER, Georg** [DE/DE]; Georg-Bonne-Strasse 81, 22609 Hamburg (DE). **MARKWART, Michael** [DE/DE]; Hartkirchener Chaussee 7 a, 25469 Halstenbek (DE). **EDOM, Andreas** [DE/DE]; Kastanienallee 23, 20359 Hamburg (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: COOLING SYSTEM AND METHOD FOR EXPELLING HEAT FROM A HEAT SOURCE LOCATED IN THE INTERIOR OF AN AIRCRAFT



(57) Abstract: With a cooling system for expelling heat from a heat source (30) located in the interior of an aircraft to a heat reducer (32), with a piping system (10) sealed against the surrounding atmosphere which is thermally coupled to a heat intake section (14) with the heat source (38) and to a heat output section (22) with the heat reducer (32), and which preferably has an essentially adiabate transport section (21), it is proposed that the piping system (10) is filled with a heat conveyance medium (12) which, when taking in heat from the heat source (38) in the heat intake section (14) undergoes a transition from the liquid phase to the gaseous phase, then flows into the heat output section (22), and here, when discharging heat to the heat reducer (32) condenses once again, and flows back into the heat intake section (14).

**WO 2005/063566 A2**



**Published:**

- without international search report and to be republished upon receipt of that report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*